

## IS THERE A TEST FOR SICKLE CELL TRAIT OR SICKLE CELL ANEMIA?

Yes. A simple blood test called Hemoglobin Electrophoresis can tell if you have sickle cell trait or sickle cell anemia. You can get the test from your doctor, public health department or sickle cell community-based organization.

By knowing if you and your partner have the trait or not, you can better plan your family, decide about having children and know the chances involved.

Babies born in South Carolina are tested soon after birth for several genetic conditions. The tests include one for sickle cell disorders. The tests are performed on a blood sample taken by pricking the baby's heel. Newborns are tested so doctors can find and treat any life-threatening medical problems.

**ASK FOR MORE INFORMATION ON SICKLE CELL FROM YOUR PUBLIC HEALTH DEPARTMENT, YOUR DOCTOR, YOUR COMMUNITY'S SICKLE CELL ORGANIZATION, OR A GENETIC CENTER IN YOUR AREA.**

**In addition: The internet has many Web sites full of accurate information about sickle cell disease. Look to those connected with sickle cell medical centers and research facilities.**



[www.scdhec.gov](http://www.scdhec.gov)

*We promote and protect the health of the public  
and the environment.*

The Division of Children with  
Special Health Care Needs

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SICKLE CELL

ANEMIA

SICKLE CELL

TRAIT

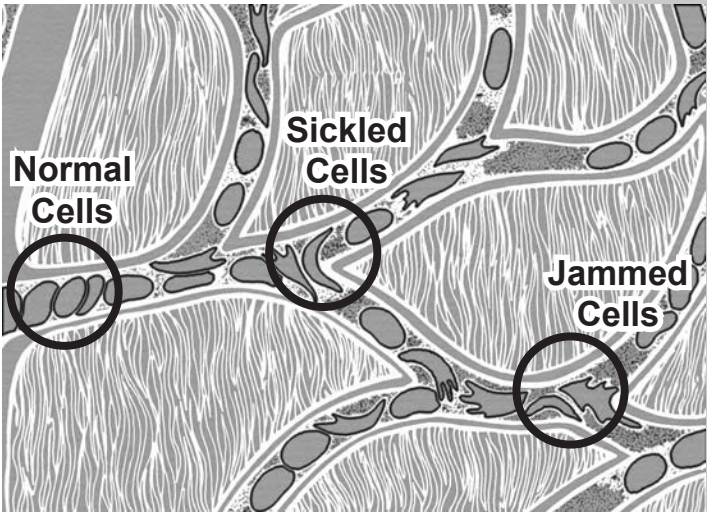
## WHAT IS SICKLE CELL ANEMIA?

Sickle cell anemia is one of many types of diseases that affect the part of the blood called hemoglobin.

Hemoglobin carries oxygen to every part of the body. It is inside the red blood cells and makes the blood red. Usually blood cells are round like doughnuts, thin and rubbery. The shape and flexibility help the cells move easily through the blood vessels that take the oxygen all over the body.

People who have sickle cell anemia have sickle hemoglobin in their red blood cells. This causes the cells to be stiff and shaped like sickles or shaped with oddly pointed ends. These pointed ends sometimes cause the cells to jam when they reach the small blood vessels. When this happens, the oxygen cannot reach all parts of the body, and this causes pain, usually in the abdomen (stomach), or joints. The oddly formed cells do not last as long as round, normal cells, and this causes anemia.

The type of hemoglobin you have is inherited from both your parents. A person who inherits sickle hemoglobin from both parents will have sickle cell disease. Sickle hemoglobin is just one of the more than 500 known hemoglobin types.



A person with sickle cell anemia may have the following symptoms: dark urine, yellowish color of the whites of the eyes (jaundice), periodic painful swelling of the hands and feet during the first few years of life, more infections than average, a poor appetite, a tendency to tire easily, and slower growth than other persons of the same age.

## WHAT CAN YOU DO TO AVOID THESE PROBLEMS?

Unfortunately, we don't yet know how to prevent these problems from happening. But there are some basic things a person can do to help stay as healthy as possible:

- Eat the right foods.
- Drink plenty of liquids.
- Avoid excessive activity.
- Get regular medical check-ups and immunizations.
- Give antibiotics each day to young children with sickle cell anemia. (This helps to prevent infections, a major cause of complications.)

## IS THERE A CURE FOR SICKLE CELL ANEMIA?

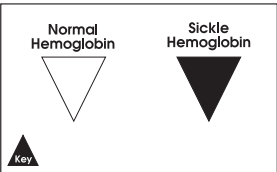
There is no widely available cure at this time, however, researchers are working hard to find one. Bone marrow transplants are the only demonstrated method of curing sickle cell disease. The transplants have been used in rare situations with some success in the United States and Europe.

## WHAT IS SICKLE CELL TRAIT?

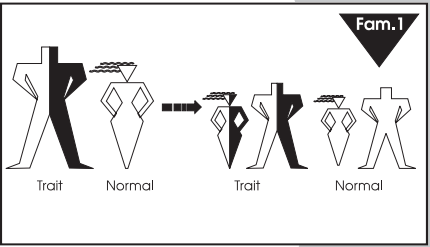
Sickle cell trait is not the same thing as sickle cell anemia. People who have the trait usually do not know they have it because it causes very few problems. About 1 out of every 10 African Americans has the trait; it occurs less often in other races. When only one parent passes the ability to make sickle hemoglobin to the newborn child, sickle cell trait occurs.

## WILL ALL CHILDREN OF PARENTS WHO HAVE SICKLE CELL TRAIT GET SICKLE CELL ANEMIA?

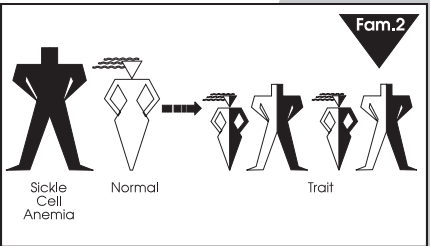
No. The following drawings help explain the different ways the children may be affected depending on which hemoglobin type each parent has.



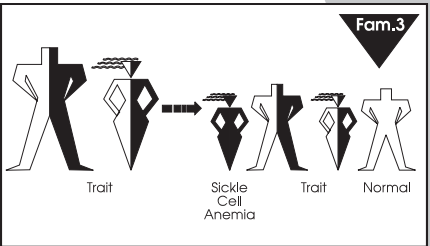
Each time this couple (Fam.1) has a baby, the baby has a 50 percent chance of having the trait and a 50 percent chance of having normal hemoglobin.



Each time this couple (Fam.2) has a baby, the baby will have sickle cell trait.



Each time this couple (Fam.3) has a baby, the baby has a 25 percent chance of having sickle cell anemia, a 50 percent chance of having sickle cell trait, and a 25 percent chance of having normal hemoglobin.



Each time this couple (Fam.4) has a baby, the baby has a 50 percent chance of having sickle cell anemia or a 50 percent chance of having sickle cell trait.

